



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/579,047

05/11/2006

Hidehiro Toyoda

G&P-5304

6271

24956

7590

07/24/2008

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.  
1800 DIAGONAL ROAD  
SUITE 370  
ALEXANDRIA, VA 22314

EXAMINER

ABRAHAM, ESAW T

ART UNIT

PAPER NUMBER

2112

MAIL DATE

DELIVERY MODE

07/24/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/579,047	<b>Applicant(s)</b> TOYODA, HIDEHIRO	
	<b>Examiner</b> ESAW T. ABRAHAM	<b>Art Unit</b> 2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-17 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### **Election/Restrictions**

1. Restriction to one of the following invention is required under 35 U.S.C. 121

Group I. Claims 1-6, drawn to a data transmission method for transmitting data through a transmission line that is integrated with a plurality of links including a first link group, a second link group, and a third link group, the method comprising: transmitting information data through the first link group that comprises at least one link included in the plurality of links; transmitting parity data generated from the information data through the second link group that comprises at least one link included in the plurality of links that is different from the first link group; and transmitting error check data generated from the information data and the parity data, which is used for an the error correction when an error occurs in the information data or the parity data, through the third link group that comprises at least one link included in the plurality of links that is different from the first link group and the second link group classified in 714/758.

Group II. Claims 7-10, drawn transmitting apparatus for transmitting data through a transmission line that is integrated With a plurality of links, comprising: an interface for a first link group that transmits information data by at least one of the plurality of links; a parity generation module that generates parity from the information data; an interface for a second link group that transmits the parity data by at least one link included in the plurality of links, which are different from the first link group; an error check data generation module that generates an error

check data used for an error correction from the information data and the parity data when the error occurs at least one of in the information data and the parity data; and an interface for a third link group that transmits the error check data by at least one link included in the plurality of links, which are different from the first link group and the second link group, wherein the interfaces transmit data synchronously through the first link group, the second link group and third link group classified in 714/775.

Group III. Claims 11-17, drawn a receiving apparatus for receiving data transmitted through a transmission line that is integrated a plurality of links, comprising: a signal conversion module that receives a signal from the transmission line, and converts received signal to a plurality of parallel signals, parity signal and check signal; an error correction module that corrects error of the parallel signals based on the check signal when an error occurs in the plurality of the parallel signals, and corrects error of the parity signal based on the check signal when an error occurs in the parity signal; a parity decoding module that decodes a lost signal based on the parity signal, when part of the parallel signals is lost, and a selection module that selects either of the received parallel signal or a decoded signal based on the parity signal, and outputs selected signal as information data classified in 714/760.

The inventions are distinct, each from the other because of the following reasons:

Invention Group I, Group II and Group III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable.

In the instance case, invention Group I has separate utility separate utility such as transmitting error check data generated from the information data and the parity data, which is used for an the error correction when an error occurs in the information data or the parity data, through the third link group that comprises at least one link included in the plurality of links that is different from the first link group and the second link group.

In the instant case, the invention of Group II has separate utility such as an interface for a second link group that transmits the parity data by at least one link included in the plurality of links, which are different from the first link group; an error check data generation module that generates an error check data used for an error correction from the information data and the parity data when the error occurs at least one of in the information data and the parity data; and an interface for a third link group that transmits the error check data by at least one link included in the plurality of links wherein the interfaces transmit data synchronously through the first link group, the second link group and third link group.

In the instance case, invention Group I has separate utility separate utility such as a signal conversion module that receives a signal from the transmission line, and converts received signal to a plurality of parallel signals, parity signal and check signal; an error correction module that corrects error of the parallel signals based on the check signal when an error occurs in the plurality of the parallel signals, and corrects error of the parity signal based on the check signal when an error occurs in the parity signal; a parity decoding module that decodes a lost signal

based on the parity signal, when part of the parallel signals is lost, and a selection module that selects either of the received parallel signal or a decoded signal based on the parity signal, and outputs selected signal as information data. See MPEP 806.05(d).

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

(a) the inventions have acquired a separate status in the art in view of their different classification;

(b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

(c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);

(d) the prior art applicable to one invention would not likely be applicable to another invention;

(e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically

point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is reminded that upon cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the specification. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### **Conclusion**

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Esaw T. Abraham whose telephone number is (571) 272-3812. The examiner can normally be reached on M-F 8am-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on (571) 272-6962. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/EA/

/Esaw T Abraham/  
Examiner, Art Unit 2112  
07/18/08



Application/Control Number: 10/579,047  
Art Unit: 2112

Page 8